Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
Federal-State Joint Board on Universal Service	)	CC Docket No. 96-45
Forward-Looking Mechanism for High Cost Support for Non-Rural LECs	)	CC Docket No. 97-160

AT&T'S REQUEST TO EXCEED PAGE LIMIT

Pursuant to section 1.3 of the Commission's rules, 47 C.F.R. § 1.3, AT&T Corp. ("AT&T") respectfully requests that the Commission waive the limit of 10 pages generally imposed on replies to oppositions to petitions for reconsideration, and allow AT&T to file 15 pages of reply comments in the above-captioned proceeding. Good cause to grant this request exists because AT&T must reply to four different oppositions totaling 47 pages. Further, each of the seven different input categories addressed in AT&T's reply is of significant importance to the determination of accurate universal service costs.

Respectfully submitted,

AT&T CORP.

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SUMMARY

AT&T's petition for reconsideration demonstrated that, in a few significant instances, the Commission has endorsed input values that will frustrate, rather than further, the Commission's stated goal of accurately estimating forward-looking universal service costs. The oppositions filed by incumbent local exchange carriers ("LECs") GTE, BellSouth, U S WEST, and Bell Atlantic do not undermine that showing, and in several instances actually confirm it.

I. *Determining Customer Locations.* GTE, U S WEST, and Bell Atlantic continue to argue that the use of PNR's geocode data must be rejected because PNR allegedly did not provide the parties with sufficient opportunity to review those data. AT&T has repeatedly shown that there is no merit to that claim, and AT&T's showing is fully supported by the incumbent LECs' latest submissions. These submissions both assert that meaningful review of PNR's large data sets requires inspection of *every* data record, and then inconsistently contend that the single non-random sample of the PNR data set that the incumbents chose to report to the Commission demonstrates that the entire data set is unreliable. Contrary to these incumbents' suggestions, PNR's arrangements were specifically designed to allow the parties to perform analyses of the samples necessary to assess the accuracy of the geocode data. That fact is confirmed by GTE's opposition, which explains at length that GTE requested, obtained, and reviewed at PNR's premises geocode data from GTE's Kentucky service area, and that this review allegedly was adequate to support findings with respect to the accuracy of those data.

GTE, U S WEST, and Bell Atlantic also attempt to bootstrap their misguided claims concerning the reliability of PNR's geocode data into an argument that because these data may not be 100 percent accurate, comparisons between these geocode data on customer locations and road surrogate data on customer locations cannot provide any evidence that the PNR road surrogating algorithm overestimates outside plant. The Commission should reject this argument

because (i) the PNR geocode data are reliable, (ii) the record contains additional evidence, including evidence submitted by Ameritech, that the road surrogate methodology assumption of uniform dispersion along roads produces distance inflation, and (iii) the incumbent LECs cannot deny the obvious fact that customers are not uniformly dispersed along roads.

II. *Copper Cable Costs.* GTE may have identified the cause of the sudden change in small underground cable costs – the Commission's decision to remove the variable identified by GTE. However, no party has any explanation why the costs of buried and fiber cable properly decline for small cable sizes, whereas the costs of underground cable improperly, and inexplicably, level off for small cable sizes. Thus, AT&T continues to believe that the Commission's approach for small underground cable is defective and produces arbitrary results.

III. *Distribution Plant Mix.* GTE claims that AT&T cannot consistently advocate the use of BellSouth's distribution plant mix data when AT&T has opposed the use of company-specific data elsewhere. GTE overlooks the fact that the situation with respect to distribution plant mix is unique because the *only* record evidence of underground distribution plant mix submitted in this proceeding was that submitted by BellSouth. Furthermore, no party has argued that these BellSouth data are inaccurate. Thus, the values for distribution plant mix should be based on the data submitted by BellSouth.

IV. *Digital Line Carrier Costs.* The incumbent LECs generally have dropped their incorrect hypothetical speculations that the AT&T/MCI WorldCom digital line carrier ("DLC") analyses did not properly account for line equipment costs. Instead, GTE claims, for the first time, that the base data on which these analyses were performed improperly omitted numerous *other* DLC costs. That novel argument is without foundation. The AT&T/MCI WorldCom

analyses were performed using contracts and data submitted by GTE and the other incumbent LECs in the DLC spreadsheet format specified by the Commission.

Second, in arguing that AT&T has failed to identify any correlation between copper feeder fill and DLC fill, GTE and BellSouth fundamentally misconstrue AT&T's argument. AT&T's point is that fill should be based on the degree of cost and time required to supplement service capacity. Thus, because it is far easier to supplement DLC cabinet capacity (*e.g.*, by simply installing a new or larger cabinet) than to supplement copper feeder capacity, which would require placing new cables, DLC fill should logically exceed that of copper feeder cable. Furthermore, AT&T has shown that estimating line card costs based on a 70 to 82.5 percent fill is even less supportable because it assumes away one of the principal benefits of the DLC technology – the ability to delay the costs associated with a line card until there is demand for the line in question.

Third, contrary to GTE's suggestion, AT&T has consistently argued that the switch investment should be adjusted downward because the forward-looking Synthesis Model produces a 40 percent average penetration value for GR303 DLC, whereas the historical data set adopted by the Commission uses the embedded 18.3 percent penetration rate for all DLCs. AT&T's recent petition for reconsideration merely noted that even this 18.3 percent figure likely reflects large amounts of non-GR303 integrated DLCs ("IDLCs") – a fact that is confirmed by GTE's opposition, which states that, in 1990, 73 percent of all DLCs were *not* IDLCs.

V. *Host/Remote Transmission Systems*. GTE concedes that the incumbent LECs' current switch placement guidelines do not reflect the use of SONET rings for host/remote systems. GTE and U S WEST nonetheless contend that the LERG assignments must be used in the model because they allegedly are the most feasible alternative currently available to

incorporate the efficiencies of host-remote relationships. GTE and U S WEST once again miss AT&T's point. AT&T has not challenged the Commission's conclusion that the LERG database should be used to determine host-remote relationships in the federal high-cost universal service support mechanism. Instead, AT&T has argued that the use of the LERG database, which, as GTE concedes, does *not* reflect the placement of host/remote systems on separate SONET rings, is inconsistent with the Commission's forward-looking interoffice transport architecture, and that this inconsistency produces a significant overstatement in interoffice costs.

VI. *Signaling Inputs.* The oppositions confirm that there can be no real dispute that signaling costs have plummeted in recent years. Accordingly, the adopted input values for switching and interoffice transport, which reflect signaling costs that are based upon outdated 1994 data, should be adjusted to reflect the more recent and accurate 1998 data submitted by BellSouth.

VII. *Customer Operations Expenses.* The Commission adopted a customer service expense value of $3.41 even though the ARMIS Report 43-04 data set shows that this value should be substantially less than $2.02. Although GTE attempts to defend this arbitrary result as a reasonable regression of aggregate data, it is inappropriate to rely on such an indirect regression analysis when, as here, the regression produces results that are far removed from direct observations.

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AT&T'S REPLY TO OPPOSITIONS TO
AT&T'S PETITION FOR RECONSIDERATION

Pursuant to the Commission's *Public Notice*,[1] AT&T Corp. ("AT&T") respectfully submits this reply to the oppositions of GTE Service Corporation ("GTE"), BellSouth Corporation ("BellSouth"); U S WEST Communications, Inc. ("U S WEST"), and the Bell Atlantic telephone companies ("Bell Atlantic"), filed in response to AT&T's petition for reconsideration of the Commission's *Tenth Report and Order*.[2]

ARGUMENT

I. DETERMINING CUSTOMER LOCATIONS

A. PNR Geocode Data

GTE, U S WEST, and Bell Atlantic continue to press their claim that the Commission must abandon any geocode-based approach for locating customers – the most accurate way to

[1] Public Notice, *Petitions for Reconsideration and Clarification of Action in Rulemaking Proceedings*, Report No. 2379, 2000 WL 16443 (F.C.C. rel. Jan. 12, 2000) ("*Public Notice*").

[2] Tenth Report and Order, *Federal-State Joint Board on Universal Service, Forward-Looking Mechanism for High Cost Support for Non-Rural LECs*, CC Docket Nos. 96-45, 97-160, 1999 WL 993682 (F.C.C. rel. Nov. 2, 1999) ("*Tenth Report and Order*").

determine customer locations, as the Commission properly recognized – because PNR allegedly did not provide them with sufficient opportunity to review its geocode data. GTE at 3-8; U S WEST at 1-3; Bell Atlantic at 2-4. AT&T has repeatedly shown that there is no merit to the incumbents' premise that they were denied a meaningful opportunity to review the PNR data.[3] But the best evidence that the incumbents' claims are meritless comes in their latest submissions, which both claim that meaningful review of large data sets requires inspection of *every* data record, and then inconsistently contend that the single non-random sample of the PNR data set that the incumbents chose to report to the Commission demonstrates that the entire data set is unreliable.

GTE, U S WEST, and Bell Atlantic first suggest that the PNR geocode data were not sufficiently available for review because the accuracy of each and every data point could not be verified at PNR's premises. GTE at 5; U S WEST at 2; Bell Atlantic at 2-3. This argument cannot be taken seriously. The PNR data sets contain over 100 million records. No party that was genuinely interested in assessing the accuracy of such a large data set would ever attempt to verify the accuracy of every record. Rather, a party would employ standard statistical methods to a stratified random sample large enough to provide statistically significant conclusions.[4] PNR's arrangements were specifically designed to allow the parties to perform such sampling, and the parties in fact did so – *i.e.*, the parties prescribed their own sampling methods and

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[3] *See, e.g.*, AT&T/MCI WorldCom July 23, 1999 Comments at 5-6; AT&T/MCI WorldCom August 6, 1999 Reply Comments at 8-9.

[4] Sample sizes sufficient to generate extremely precise inferences about the accuracy of these data (*i.e.*, standard errors of 1.5 percent or less) are about 1100 records. Thus, if verification were required at the national density zone level, less than 1/1000 of 1 percent of all records would need to be examined. And, if verification were required at the study area level within density zones, still less than 1/100 of 1 percent of all records would need to be reviewed. *See, e.g.*, Edwin Mansfield, *Statistics for Business and Economics*, 265-67 (2nd ed. 1983).

reviewed the sample data according to those methods. GTE's opposition confirms this fact. *See* GTE at 3. Specifically, GTE explains at length that it requested, obtained, and reviewed at PNR's premises geocode data from GTE's Kentucky service area. In light of GTE's "findings" with respect to Kentucky, it is clear that access to the PNR data was not, as GTE alleges, "an empty gesture." GTE at 3.

GTE goes too far, however, in suggesting that the GTE-South (Kentucky) results it reports demonstrate that the PNR data are inaccurate. GTE discloses neither the specifications of its Kentucky sample nor the statistical methods it applied to that sample, much less the "actual GTE" data against which it claims to have compared the PNR data. In these circumstances, the Commission can draw no meaningful conclusions from GTE's self-supporting rhetoric about supposed misassignments.[5]

In any event, any debate over PNR's geocode data should have concerned the valid statistical inferences that could be drawn from well-designed stratified random samplings, and whether and how the data might be adjusted to account for any discovered inaccuracies. Instead, the Commission, at the incumbents' urging, chose to use a road surrogating approach that disregards clusters of customers as they exist both on and off roadways, and relies on the accuracy of raw Census Bureau data that are not available for review at all. Recognizing the incompatibility between their attack on the PNR data and their support for an inferior customer location methodology based on unreviewable Census Bureau data, the incumbents claim that the

[5] Nor is their any merit to U S WEST's claim that the PNR geocode data overstate customer clustering by relying on post office box data. U S WEST at 4-5. As US WEST is aware, PNR's geocoding process treats post office boxes as non-geocodable points. *See Ex Parte* Letter from Richard N. Clarke, AT&T to Magalie Roman Salas, Secretary, FCC (filed Dec. 23, 1997) (providing "User's Guide" to Centrus Desktop geocoding software); *see also Ex Parte* Letter from Richard N. Clarke, AT&T to Magalie Roman Salas, Secretary, FCC (filed Jan. 13, 1998).

raw Census Bureau data set can be trusted because it "is a bedrock upon which extremely important decisions rest." U S WEST at 2. But the same can be said of the PNR data. PNR's data are taken from such reputable sources as Metromail and Dun & Bradstreet – organizations that are in the business of selling these data (successfully) to thousands of businesses willing to pay very large amounts for accurate marketing information concerning residence and business locations. Thus, according to the incumbents' own criterion, the PNR geocode data should be deemed reliable. The reality, of course, is that the incumbents' interest is not with the reliability or accuracy of the data, but rather with securing the significant distance and cost inflation produced by the road surrogate algorithm.

B. PNR Road Surrogate Algorithm

GTE, U S WEST, and Bell Atlantic attempt to bootstrap their misguided and unsupported claims concerning the accuracy of PNR's geocode data into an argument that because these geocode data may not be 100 percent accurate, comparisons to these data cannot provide any evidence that the PNR road surrogating algorithm overestimates outside plant. GTE at 8-9; U S WEST at 3, Bell Atlantic at 3-4. The Commission should reject this tactic for three reasons. *First*, as described above, the PNR geocode data are reliable. *Second*, and contrary to the incumbent LECs' suggestions, the record also is replete with additional evidence, including evidence submitted by Ameritech, that the road surrogate methodology's assumption of uniform dispersion along roads produces distance inflation. *See, e.g.*, AT&T Petition at 7-8. *Third*, the incumbent LECs cannot and do not deny the fact, confirmed by both common experience and the record evidence, that customers are not uniformly dispersed along roads. *Id.*

U S WEST complains that AT&T has failed to describe sufficiently the adjustment that should be made to correct this obvious flaw in the PNR road surrogate algorithm. U S WEST at 4-5. AT&T's May 20, 1999 *ex parte* submission, however, provided a detailed description of the

necessary adjustment to the PNR road surrogate algorithm, and the reasons underlying that proposal. Thus, if the Commission refuses to reconsider its decision to rely on the inferior road surrogate algorithm, the Commission should, at a minimum, adjust that algorithm to minimize the significant distance inflation that it currently produces.

II. COPPER CABLE COSTS

In its petition for reconsideration, AT&T expressed concern that the estimated costs of small underground copper cables adopted in the *Tenth Report and Order* more than doubled from the values proposed by the Commission in the *Inputs Further Notice*. AT&T Petition at 8-9. GTE points out that this change in small underground cable costs may have resulted from the Commission's decision to "remove from the regression equation for 24 gauge underground copper cable the variable that is the mathematical square of the number of the copper cable pairs." GTE at 9 (quoting *Tenth Report and Order*, ¶ 135). Upon review, AT&T agrees that the change in small underground cable costs could have been caused by the Commission's decision to remove this variable. Nonetheless, AT&T continues to believe that the Commission's approach for small underground cable is defective, and produces arbitrary results, because the costs of buried and fiber cable properly decline for small cable sizes, whereas the costs of underground cable improperly, and inexplicably, level off for small cable sizes. And no party has explained, and no record evidence suggests, why small cable costs should level off for underground cable, but not for buried or aerial cable. That result is contrary to both logic and the record.

BellSouth claims that the unjustifiable anomaly in small underground cable costs nonetheless must be upheld because the Commission "did not adopt specific copper cable input values from the tentative decision, but rather . . . adopted the data sources and the regression equations for calculating the input values." BellSouth at 2. But the issue is not whether the

Commission adopted input values or the regression equations that produced those values, but whether the calculated input values for small underground copper cables are logically defensible. Because the values for these cables level off while the values for small buried and aerial cables continue to decline, and nothing in the record supports this unique and illogical result for underground cable, the Commission should correct this anomaly.

III. DISTRIBUTION PLANT MIX

The adopted input values for distribution plant mix call for too much underground cable and too little aerial cable, as confirmed by the relevant evidence submitted by BellSouth. *See, e.g.*, AT&T Petition at 9-10. GTE claims that "[i]t is disingenuous for AT&T to advocate the use of company-specific data in this context when it has repeatedly opposed the use of company-specific data elsewhere." GTE at 10. It is neither disingenuous nor inconsistent for AT&T to do so. AT&T has consistently advocated using the most accurate data source for each cost model input. Where other verifiable and more reliable data is available, this sensible approach obviously counsels against relying on the incumbent LECs' self-reported company-specific input values. *See, e.g.*, AT&T Feb. 7, 2000 Opposition at 9-11. The situation with respect to distribution plant mix is very different, however, because the *only* record evidence of underground distribution plant mix submitted in this proceeding was that submitted by BellSouth. Thus, if the input values for distribution plant mix are to be based on record evidence, then those values must be based on the data submitted by BellSouth. Moreover, the BellSouth figures are highly probative of national values because the figures are derived from data concerning 9 different states. Those data show that the maximum percentage of

underground distribution plant in any of BellSouth's 9 states was a mere 2 percent, a figure that is dramatically less than the percentages adopted in the *Tenth Report and Order*.[6]

IV. DIGITAL LINE CARRIER COSTS

A. Equipment Costs

After an extensive examination of the incumbent LECs' contract records, AT&T and MCI WorldCom were unable to find a *single* instance in which the incumbent LEC contract data supported the proposed values that the Commission has now adopted for digital line carrier ("DLC") inputs. *See* AT&T Petition at 11-13. Contrary to the Commission's finding, this analysis explicitly included line equipment costs as a separate line item and in amounts quite similar to the estimates reflected in the incumbent LEC DLC proposals adopted by the Commission. *Id.*[7]

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[6] Bell Atlantic claims that AT&T "suffers from a misconception" because AT&T allegedly believes that "the Commission's input factors must have been based on BellSouth's data," and "the Commission did not rely on BellSouth's data, it rejected it." Bell Atlantic at 4. As described above, AT&T's complaint is not that the Commission relied on BellSouth's data, but rather that the Commission rejected the use of that data.

[7] Bell Atlantic claims that the AT&T/MCI WorldCom analysis "did not compare the proposed cost for a '4-Line POTS Card' to the line card costs in the local exchange carriers' contract data." Bell Atlantic at 5. As AT&T has previously shown, however, the line equipment estimates reflected in the AT&T/MCI WorldCom DLC proposals are quite similar to the line equipment estimates reflected in the incumbent LEC DLC proposals adopted by the Commission. *See, e.g.*, AT&T Petition at 12-13. For that reason, the example comparisons supplied by AT&T and MCI WorldCom properly focused on the incumbent LECs' common equipment cost data – data that support the HAI proposals and refute the much higher incumbent LEC proposals adopted by the Commission. Bell Atlantic also complains that the "'4-Line POTS Card' only represents the line card at the remote terminal in a digital line carrier system – it does not include the cost of the line equipment in the central office." Bell Atlantic at 6. To the extent Bell Atlantic is referring to central office terminal ("COT") equipment, Bell Atlantic's claim is flatly wrong. *See, e.g.*, AT&T Petition at A-1 (detailing COT costs). To the extent Bell Atlantic is referring to port facilities on the switch, Bell Atlantic is improperly requesting that the Commission double count costs because these port costs are developed separately in the Synthesis Model in its buildup of switch investments.

GTE does not challenge AT&T's showing that the AT&T/MCI WorldCom DLC analyses properly accounted for line equipment costs. Instead, GTE claims, for the first time, that the analyses improperly omitted numerous *other* DLC costs, including "software costs for the DLC CO Terminal and the Remote Terminal," "the costs of remote batteries, protectors and a power pedestal," the costs of "a metallic test access unit or a ringing generator unit," and the costs of "freight, sales tax, provisioning, and minor material expenses." GTE at 14-15. To the contrary, the AT&T/MCI WorldCom analyses were performed using contracts and data submitted by GTE and the other incumbent LECs in the DLC spreadsheet format specified by the Commission. Furthermore, GTE has represented to this Commission that these DLC spreadsheet submissions properly identified its complete DLC costs. *See, e.g.*, GTE's July 23, 1999 Comments at 62.[8]

B. DLC "Fill Factors"

Because there can be no serious argument that it is more difficult or takes longer to increase DLC cabinet or transmission system capacity than to increase copper feeder capacity, DLC remote terminal cabinets should be sized using a fill factor that is no less than the copper feeder fill factor for the relevant density zones. *See, e.g.*, AT&T Petition at 13-14. In arguing that AT&T has failed to identify any correlation between copper feeder fill and DLC fill, GTE and BellSouth fundamentally misapprehend both AT&T's argument and the purpose of fill factors. *See* GTE at 15-16; BellSouth at 3.

The purpose of fill factors is to ensure sufficiently reliable service to customers. *See, e.g., Tenth Report and Order*, ¶ 186. As a result, a critical issue in determining appropriate fill

[8] AT&T believes that GTE's newly-discovered costs are either unnecessary or have been accounted for under other spreadsheet line items. Indeed, GTE's argument here is analogous to a car dealer who, upon agreeing to a price for a car, proceeds to attempt to impose additional charges for the cost of the tires, the windshield wipers, and the oil in the crankcase before the customer receives the keys.

factors is how quickly (and inexpensively) capacity can be added to existing facilities to account for unexpected needs. AT&T's point is that it is far easier to supplement DLC cabinet capacity (*e.g.*, by simply installing a new or larger cabinet) than to supplement copper feeder capacity, which would require placing new cables. Thus, if a 80 percent fill factor for copper feeder in a particular area is deemed adequate to provide sufficiently reliable service, it is arbitrary to require a lower fill factor for DLC cabinets in that area, given that DLC cabinets are more easily augmented. Indeed, if anything, the fill factors for DLC remote terminal cabinets should be *higher* than those for copper feeder in the same density zone. AT&T Petition at 13-14.

Estimating line card costs based on a 70 to 82.5 percent fill is even less supportable because it assumes away one of the principal benefits of the DLC technology – the ability to delay the costs associated with a line card until there is demand for the line in question. *Id.* at 14. Line cards can easily be added to DLC remote terminals on extremely short notice, or during the regular and frequent occasions when technicians visit those terminals for inspection and maintenance. Thus, consistency and the Commission's efficient least-cost criterion require the Commission to use the same 94 percent fill factor that it adopted for switch line card fill to reflect the same efficient deployment practices.

GTE, however, contends that "use of only the switch card fill for the DLC is not justified since it represent one extreme for one component of the DLC" whereas "the FCC model appears to be a reasonable average of all the components used in a DLC." GTE at 16. That argument is incorrect because no appropriately calculated "average" is being used. As AT&T has shown, DLC cabinet fills should reasonably exceed the 70 to 82.5 percent fill range for copper feeder, and line card fills should be 94 percent. Thus, because line cards constitute a considerable portion of DLC costs, an appropriately calculated "average" would significantly exceed the Synthesis Model's 70 to 82.5 percent overall DLC fill factor.

C. Switching Cost Adjustment.

In response to AT&T's showing that the *Tenth Report and Order* improperly refused to make adjustments to the switch data sets that account for the savings associated with the use of integrated DLCs ("IDLCs"), AT&T Petition at 14-15, GTE claims that AT&T has "softened its position" over time. GTE at 16. In fact, AT&T has consistently argued that the switch investment should be adjusted downward because the forward-looking Synthesis Model produces a 40 percent average penetration value for GR303 DLC, whereas the historical data set adopted by the Commission uses the embedded 18.3 percent penetration rate for all DLCs. *See, e.g., Tenth Report and Order*, ¶ 325. AT&T's recent petition for reconsideration merely noted that even this 18.3 percent figure likely reflects large amounts of non-GR303 IDLCs (whose cost savings at the switch are considerably less) – a fact that is confirmed by GTE's opposition, which states that, in 1990, 73 percent of all DLCs were *not* IDLCs. GTE at 17.

AT&T's proposed $30 adjustment is composed of two parts, both of which are supported by the record. *See, e.g.*, AT&T Petition at 15. First, the $12.00 MDF investment used for analog lines should be removed for all IDLC lines because it is undisputed that IDLC lines do not require a MDF to terminate at the switch. Second, Bell Atlantic's own expert confirmed that even apart from the savings associated with the MDF, an IDLC switch port termination should cost between $8 and $28 less than an analog line interface. *Id.* Thus, the record supports a total IDLC saving of $20 to $40, and AT&T's proposed adjustment of $30 therefore is eminently reasonable.

GTE claims that GR303 IDLC switch ports are more expensive than non-GR303 IDLC switch ports because the switch interfaces of the former are more "feature rich" than those of the latter. GTE at 17. That contention is simply incorrect. Although GR303 IDLC switch ports are more feature rich, that functionality allows a much greater concentration of subscriber lines as

compared to older technology. And, as Bell Atlantic has testified in New York, this engineering advantage makes GR303 IDLC *less* expensive, on a per-subscriber basis.[9]

V. HOST/REMOTE TRANSMISSION SYSTEMS

The use of embedded LERG switch assignments is inconsistent with the use of the Synthesis Model's extremely forward-looking interoffice transport architecture, which places host/remote systems on separate SONET rings. *See, e.g.*, AT&T Petition at 15-16. GTE concedes that the incumbent LECs' current switch placement guidelines do not reflect the use of separate SONET rings for host/remote systems. GTE at 21. GTE and U S WEST nonetheless contend that the LERG assignments must be used in the model because they allegedly are the most feasible alternative currently available to incorporate the efficiencies of host-remote relationships. GTE at 19; U S WEST at 5-6.

GTE and U S WEST miss the point. AT&T has not challenged the Commission's conclusion that the LERG database should be used to determine host-remote relationships in the federal high-cost universal service support mechanism. *See Tenth Report and Order*, ¶ 320. Instead, AT&T has argued that the use of the LERG database, which, as GTE concedes, does *not* reflect the placement of host/remote systems on separate SONET rings, produces a significant overstatement in interoffice costs when that database is used *in conjunction with* the Commission's forward-looking interoffice transport architecture, which *does* reflect the placement of host/remote systems on separate SONET rings. Although GTE labels this

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[9] Panel Testimony of Bell Atlantic-New York on Revised Costs and Rates for Unbundled Network Elements and Related Wholesale Services at 133-134, *Proceeding on Motion of the Commission to Examine New York Telephone Company's Rates for Unbundled Network Elements*, Case No. 98-C-1357 ("Engineering studies have demonstrated that the cost per line of multiplexing in an NGDLC RT, plus the cost of a digital port at the circuit switch, is always less than an analog voice termination option at the switch.")

argument "speculati[ve]," GTE at 18, AT&T has shown that this combination of database and architecture will overstate interoffice transport costs by requiring carriers to amortize too much expensive electronics and costly redundant transport over too few subscribers. *See, e.g.*, AT&T Petition at 16.

To remedy the cost-inflation caused by the contradictory assumptions underlying the LERG database and the Commission's forward-looking architecture, the Commission has two reasonable options. The Commission could use unadjusted LERG data to determine host/remote relationships, and then adjust the adopted architecture assumptions to produce more accurate forward-looking costs. Alternatively, the Commission could retain the Synthesis Model's forward-looking interoffice architecture, and then adjust the LERG data to reflect actual forward-looking practices. While there are many different ways of making these modifications, one approach is to establish an efficient SONET ring structure based on the size and locations of the central offices independent of the LERG host/remote assignments, and then designate, by ring system, the candidates for remotes based on a line threshold and a designated host determined without regard for existing homing arrangements. The one approach that is plainly arbitrary and overstates costs, however, is the *Tenth Report and Order*'s approach of combining non-forward-looking LERG data with forward-looking architecture assumptions.

VI. SIGNALING INPUTS

The adopted input values for switching and interoffice transport reflect signaling costs that are based upon outdated 1994 data that should be adjusted to reflect more recent signaling cost data submitted by BellSouth in 1998. AT&T Petition at 16-17. GTE again contends that AT&T cannot, consistent with its general opposition to incumbent LECs' company-specific data-based proposals, support an adjustment based on such data. GTE at 22. Again, however, the Commission's goal should be to rely upon the best available evidence – regardless of source –

for each input value. Because BellSouth's data are both more recent and significantly *lower* than the older values adopted by the Commission, an adjustment is warranted. Conspicuously absent from GTE's lengthy harangue is any attempt to argue that BellSouth's data understate current signaling costs. This omission is not surprising because there can be no legitimate dispute that signaling costs have plummeted in recent years. Accordingly, the Commission should replace the 1994 signaling costs with the more recent and more accurate 1998 data submitted by BellSouth.

VII. CUSTOMER OPERATIONS EXPENSES

The Commission adopted a customer service expense value of $3.41 even though the ARMIS Report 43-04 data set shows that this value should be substantially less than $2.02. AT&T Petition at 17. GTE defends this arbitrary result as a reasonable regression of aggregate data that included customer service expense. GTE at 24. Where there is more reliable direct evidence of an appropriate input value, however, it is inappropriate to rely on an indirect regression analysis – at least where, as here, the regression produces results that are so far removed from direct observations.

Elsewhere, the Commission has recognized as much. For example, the Commission adjusted the marketing cost input values based on an analysis performed by Economics and Technology, Inc., which used the accounting detail for marketing costs to "disaggregat[e] product management, sales, and advertising expenses for basic (residential) telephone service from total marketing costs." *Tenth Report and Order*, ¶ 403. Similarly, here, the ARMIS Report 43-04 accounting detail provides direct evidence that the customer service expense value should be substantially less than $2.02. AT&T Petition at 17. This evidence reveals that the Commission's regression equation is defective with respect to the customer service expense

value, and that the Commission either should fix the equation, or adopt a customer service expenses directly based on the ARMIS data.[10]

[10] Indeed, the resulting value should be substantially less than the $2.02 reported in the ARMIS Report 43-04 data set because at least $1.05 of that amount is attributable to service order processing which is not fully recoverable as a universal service expense. AT&T Petition at 17.

CONCLUSION

For the foregoing reasons, the Commission should revise the adopted input values as described herein and in AT&T's petition for reconsideration.

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February 23, 2000

CERTIFICATE OF SERVICE

I, Rudolph M. Kammerer, do hereby certify that on this 23rd day of February, a copy of the foregoing was served via U.S. first class mail, postage prepaid, to the parties listed on the attached Service List.

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